DOCUMENT RESUME

ED 433 078 PS 026 290

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TITLE Promotion of Primary Education for Girls and Children in Disadvantaged Areas in Gansu Province, China.
PUB DATE 1997-05-00
NOTE 24p.; Paper presented at the Asia Literacy Regional Forum (Manila, Philippines, May 5-9, 1997).
PUB TYPE Reports - Evaluative (142) -- Speeches/Meeting Papers (150)
EDRS PRICE MF01/PC01 Plus Postage.
DESCRIPTORS *Access to Education; Community Development; *Disadvantaged; Educational Attitudes; Educational Environment; *Elementary Education; *Equal Education; *Females; Foreign Countries; Pilot Projects; Program Effectiveness; Rural Schools; School Community Relationship; *Womens Education
IDENTIFIERS China (Gansu Province); UNESCO

ABSTRACT

Universalizing primary education for girls and children in disadvantaged areas remains the most challenging task for developing countries in Asia and the Pacific. This evaluation report reviews the processes and outcomes of the Pilot Project on Promotion of Primary Education for Girls and Children in Disadvantaged Areas in Gansu Province, China, a UNESCO-sponsored project through the Asian-Pacific Program for Education for All implemented between 1991 and 1995. The report is presented in three parts. Part 1 describes the planning procedures; the target areas; and the project objectives, scope, activities, and evaluation plan. The major activities of the pilot project involved mobilizing influential persons in the community to ensure community participation, providing family education to parents, training educational personnel, developing supplementary learning materials combining functional literacy with vocational skills, and providing preschool education. Part 2 details educational deficits in the targeted area's available school facilities, outlines the specific intervention procedures and additional studies undertaken, and presents outcomes. Findings indicated that the enrollment rate and retention rate have been raised by 11 percent and 3 percent, respectively, and the repetition and dropout rates have been reduced by 8 percent and 2 percent, respectively. Girls' participation increased steadily in all counties involved. Part 3 of the report discusses the implications of the study, concluding that the pilot project proves that with well-designed and implemented interventions, serious disadvantages can be overcome to make a difference in the lives of girls. Part 4 outlines problems with the project and makes suggestions for future programs. (KB)

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ASIA LITERACY REGIONAL FORUM

Promotion of Primary Education for Girls and Children in Disadvantaged Areas in Gansu Province, China

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Manila, Philippines
May 5-9, 1997

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Promotion of Primary Education for Girls and Children in Disadvantaged Areas in Gansu Province, China

Zhang Tiedao and Jing Min

Universalizing primary education among girls and children in disadvantaged context remains to be the most challenging task for the developing countries in Asia and the Pacific. To tackle with this problem, the UNESCO Principal Office for Asia and the Pacific (PROAP) has coordinated the Member States to undertake numerous innovative programs particularly through its dual programs, namely, the Asian-Pacific Program of Educational Innovation development (APEID) and the Asian-Pacific Program for Education for All (APPEAL).

This evaluation report was prepared to review the processes and outcomes of the Pilot Project on Promotion of Primary Education for Girls and Children in Disadvantaged Areas in Gansu Province, China, a UNESCO-sponsored project through APPEAL implemented between 1991-1995.

1. Background

1.1 Origin

The UNESCO Principal Office for Asia and the Pacific, in collaboration with several Member States, organized a planning meeting in July-August 1991 in Chiangmai, Thailand, to examine the priority needs of generating grassroots-based pilot programs as growth points for promotion of primary education for girls and disadvantaged groups in difficult contexts. At the initial stage, China, India, and Nepal were involved in the pilot intervention.

Since the promulgation of the Compulsory Education Law of the People's Republic of China in 1986, significant progress was achieved in the universalization of primary education. In 1990, the enrollment rate among school-ages rose to 97.80 percent, of which the enrollment rates for rural children and girls were 97.4 percent and 96.31 percent respectively, a rise of 2.1 percent and 3.3 percent as compared with the data in 1985. Universal primary education has been achieved in 76 percent of the total counties, covering 91 percent of the total population of the nation.

However, there are still a remarkable gap between advanced coastal, urban areas and the vast rural, minority and disadvantaged areas in the provision of primary education, particularly for girls. It was indicated that the enrollment rate was 97.94 percent (96.37 percent for girls) and that among the total 2,005,000 out-of-school children in 1990, 1,685,000 (or 84.07 percent) were girls. Besides, the repetition and drop-out rates among girls were much higher than

boys. Therefore, school-aged girls become the most disadvantaged population group in fulfilling their basic learning needs.

Among the disadvantaged provinces, Gansu is typical in many ways. The unfavorable natural and economic conditions, with infertile land sparsely populated with various ethnic groups, present a difficult context for the development of education. The enrollment rate among school-aged children has been below the national level average. Most of the out-of-school girls are from the remote, poverty and minority rates. In 1989, the enrollment rate in the twenty minority counties of the province was 82.79 percent and 71.1 percent for girls only. Besides, five out of the twenty minority counties in the province have the girls' enrollment rate below 60 percent.

1.2 Target Areas

In the province, the project was located in three most poverty-stricken counties namely Tongwei, a mountainous county with dry weather and impoverished soil; Hezheng, a cold hilly area populated mainly with Muslim; and Tianzhu, a vast pastoral grassland sparsely inhabited by Tibetan, Hans and other minority groups. With unfavorable climate, poor economy and lack of income, the three counties have to depend much on the government relief for a long time.

At the initial stage in 1992, integrated in-depth investigations were conducted at provincial, county, township and school levels. It was made apparent with the investigation that the school conditions, examined either with hardware or software indicators, were rather insufficient to meet the basic needs of teaching and learning. It was shown that the enrollment rate of school-aged children in 1991 was 91 percent and that the repetition and dropout rates were respectively 17 percent and 5 percent. A distinct gap existed between boys and girls when measured by sex. Further inquiries revealed that the lack of provision and achievement, particularly among girls was complicated with obstacles of social, cultural, economic and educational factors. Consequently, an action plan was developed for promoting primary education of girls and disadvantaged population groups.

Table 1. Development Indicators of Pilot Counties, Gansu (1991)

Indicators	Hezheng	Tianzhu	Tongwei
Population	165,100	209,375	400,500
Per capita cultivated land (mu)	1.46	1.76	4.63
Annual income of farmers (yuan)	285	425	326
Public revenue (10,000 yuan)	230	947	617
Public expenditure on education (10,000 yuan)	240	588	617
Illiteracy/semi-illiteracy rate of 15-40 year old (ave. %)	45.46	9.80	21.71
(females %)	76.78	69.35	72.7

Our investigations conducted in the 15 project schools revealed the following facts:

- that the enrollment rate was 83.9% (65.4% for girls);
- that parental illiteracy rate was high, 29% for fathers and 75% for mothers;
- that school facilities were inadequate with one third of unqualified teachers, 0.85 set of desk and chair and 1.3 copies of reading material for each child, and 6.7 A% of school building in dangerous conditions;
- that children's achievement was obstructed with repetition and dropout. Out of 429 children surveyed, 238 repetition cases were reported, common particularly at the initial years of schooling due to lack of preschool preparation. The gross dropout rate was 11% (17% for girls). The completion rate was merely 43%.

It was the assumption of the project that conventional practice could not ensure the full access and achievement of girls and disadvantaged children during their primary education cycle unless alternative intervening strategies were exerted in an integrated and sustained manner. Thus the following actions were carried out to achieve the objectives of the project.

1.3 *Project Objectives*

The overall objective of the project in Gansu was defined as to achieve the target of UPE among all school-aged girls and disadvantaged population groups through changing the outdated values and beliefs and improving the educational environment of schooling in disadvantaged areas.

The specific objectives of the project we specified as:

- To change the traditional misoriented beliefs about education and to promote the view that education should serve for the development of the community;
- To create a favorable environment conducive for effective participation and learning achievement of girls and other disadvantaged children in primary education;
- To explore and accumulate new and useful experiences for the promotion of primary education for girls and disadvantaged population groups in China;
- To actualize the potential role of rural school as a community development center thus to obtain the community support for education.

1.4 *Project Scope*

The pilot project as first initiated in 15 primary schools in the 3 counties of Gansu Province, namely Tianzhu (Tibetans), Hezheng (Muslim/Hui) and Tongwei (Han). In the meantime, the Project was also introduced in disadvantaged areas in Guizhou, Ningxia and Qinghai provinces from 1992.

15 *Project Actions*

Activities	Outcomes
Mobilization of parent and community	Influential personalities (local officials, religious leaders and parents) formed committees to make sure that all girls and disadvantaged children participate in primary education and school conditions were gradually improved. Parental schools are to be operated to disseminate scientific knowledge and skills and practical methods for family education.
Training educational personnel	Extensive training was to be acquired by people involved in the project such as village leaders, educational officials, researchers, headmasters and teachers. Advocacy materials and teachers' handbooks were developed with particular reference to the needs of girls and disadvantaged children.
Development of supplementary learning materials focused on formal primary education and productive skills	Learning materials to combine functional literacy skills with vocational/life pro-skills such as weaving/knitting, embroidery, we produced and taught by non-formal means.
Preschool intervention	Preschool classes are to be set up transit preschool girls to formal schooling.

Monitoring and Evaluation

A project committee as formed comprising educational officials responsible for primary education, minority education, teacher training and educational research. The leaders of educational administration at provincial, and prefectural levels would supervise the project and ensure the allocation of necessary resources for the project. At county level, the project committee will involve not only educational administrators but also local officials and community members. At the grassroots' level, the school headmasters we put in charge of the project implementation.

Evaluation as shared responsibility. It was frequently engaged at grassroots level 1. The provincial committee sent field workers and organized annual

planning during the project implementation. The monitoring and supervision will be undertaken as a facilitating mechanism.

Effort would be made to involve professional institutions and researchers throughout the country through exchange of newsletters or publications and conduct of workshops/seminars.

The outcomes of the project would be disseminated to other provinces and member countries through cooperative-operative research, workshops and exchange of information.

ACEID and Chinese National Commission for UNESCO were expected to play a supervisory role in the project monitoring and evaluation.

Work Plan

Major Activities	1991	1992	1993	1994
1. Planning meeting/ orientation	Dec.			
2. Survey and case studies		Mar.		Apr.
3. Developmen t of advocacy and learning materials, teachers' handbooks		Mar-Feb		
4. Training of township leaders, headmasters		Apr.		
5. Establishme nt of education board at township level		May		
6. Establishme nt of parental schools		May		
7. Training workshops for teachers		Apr.-May (prov.)	Concurrently (county)	
8. Pedagogical exchanges and sharing		Aug-Oct (county	July (prov.)	July (prov.)
9. Mid-term evaluation/ review		May		
10. Final evaluation/ national seminar on the outcomes and impact of the project and further expansion of the project				Oct.

II. Implementation

2.1 *Field Investigation*

In order to obtain and in-depth understanding of the disadvantages associated with UPE in the three counties, investigation studies were conducted and scholastic tests were introduced in the project schools.

It was identified by GIER researchers that the provision of primary education in the three counties suffered from the following major disadvantages:

1. Situated in the unfavorable natural environment, the three counties were primarily dependent upon the weather for their crops and some of the local people were still unable to be self-sufficient.

Table 1. Natural Environment

Item Area	Provincial Average	Hezheng	Tianzhu	Tongwei
Average/max. ground level above the sea level (m)	1000/3000	2400/3000	3600/4847	1900/2200
Average temperature in Jan. (°C)	-14 - 4	-7.00	-12.30	-7.50
Average temperature in July (°C)	16 - 26	18	11.20	17.20
Annual rainfall (mm)	-	700	355	556
Per capita cultivated land (mu)*	2.33	1.46	1.76	4.63

*mu, a unit of area, equals to 0.667 hectare.

2. The major indicators in the three counties prove to be much lower than average.

Table 2. Population and Per Capita Grain

Item Area	Provincial Total	Hezheng	Tianzhu	Tongwei
Population (1,000)	22,849	165	109.4	400.5
Per capita grain possessed (kg)	n/a	253.00	*	294.41

*Tianzhu is an animal husbandry area and most of the resident have to rely on commodity grains.

Table 3. Major Economic Indicators

Item Area	National Average	Provincial Average	Hezheng	Tianzhu	Tongwei
Per capita industrial and agricultural output (yuan)*	2,518.52	1,512.40	305.71	577.96	436.98
Per capita agricultural output (yuan)	576.44	398.38	254.91	365.71	314.48
Per capita industrial output (yuan)	1,492.08	1,114.01	50.80	212.25	122.50
Agricultural and industrial rate*	1:3.37	1:2.80	1:0.20	1:0.58	1:0.39
Per capital GNP (yuan)*	1,727.11	1,090.69	431.46	485.31	252.59
Total revenue (10,000 yuan)**	-315,000	315,000	230.00	947.40	617.40
Per capita income for rural population (yuan)**	1,602.00	405.00	285.16	425.00	326.90

*1990 figures
**1991 figures

Note: The official exchange rate between US dollar and the Chinese currency RMB yuan was around 1:5.3 in 1991.

3. Located in high mountains, the three counties did not have sufficient transport and communication services. Some remote township and villages in Tianzhu where still inaccessible with transport and were oftentimes cut off from the outside world in the case of snow or rain falls. Hezheng county is fairly flung away from the main road. For this reason, the village people in remote and mountainous areas were practically isolated.

4. The education provision was inadequate and there was a significant proportion of population who were unable to benefit from schooling.

Table 4. Illiteracy and Semi-illiteracy Among 15-40 Age Groups

Item Area	National Average	Provincial Average	Hezheng	Tianzhu	Tongwei
Total	15.85	27.94	45.46	9.80	21.71
Male		26.39	21.22	30.65	27.30
Out of the Female		73.41	78.78	69.35	72.70
Total Difference		-47.02	-57.56	-38.70	-45.39

5. The current schooling system was characterized with poor quality of teachers, inadequate supply of necessary facilities and undesirable achievement of children and particularly girls.

Table 5. Teachers' Qualification

Item Area	Province	Hezheng	Tianzhu	Tongwei
Number of teachers at primary level	133,429	755	1,424	2,263
Gongban teachers (%)*	53.88	57.35	57.58	33.01
Minban teachers (%)**	46.12	42.65	42.42	67.08
Female teachers	28.71	23.97	26.83	8.90
Teachers with required qualification (%)	79.10	82.70	50.80	48.00
Teacher pupil ratio	1:18.20	1:17.54	1:15.08	1:20.00

*Gongban teachers are those who normally have required qualification and are employed by the government.

**Minban teachers are those who may not possess the required qualification but employed by the local community.

Study also showed that the majority of the teachers were graduates from secondary normal schools in recent years and many of them were unprepared to teach in remote areas. It was identified that school headmasters were in urgent need for motivation and professional assistance.

Table 6. School Facilities Available in the Counties

Item Area	Hezheng	Tianzhu	Tongwei
Available set of desk/stool per student	0.85	0.79	0.91
Average value of sports/cultural facilities for each student (yuan)	1.94	11.40	2.73
Books for each student in addition to textbook	1.00	2.32	0.60
Sub-standard building (%)	6.00	6.90	7.00

Table 7. Basic Data on UPE

Item Area		Hezheng	Tianzhu	Tongwei
Enrollment rate (%)	Total	81.00	95.40	95.49
	Female	70.50	94.24	90.88
Cohort completion rate (%)	Total	63.91	51.80	9.82
	Female	54.58	50.00	10.47
Repetition rate (%)	Total	14.47	13.70	23.13
	Female	23.89	13.11	27.32
Drop-out rate (%)	Total	8.99	0.78	3.66
	Female	16.54	5.59	5.59

6. An investigation in the out-of-school children in service areas of the 15 pilot schools made it clear that there were 249 school-aged children including 158 girls who had not access to schooling. According to the study, these children were unable to participate in schooling mainly because of economic constraints, parents' reluctance and remote location of families. Besides, the irrelevant learning materials and instructions also contributed to the inability of schooling to attract children.

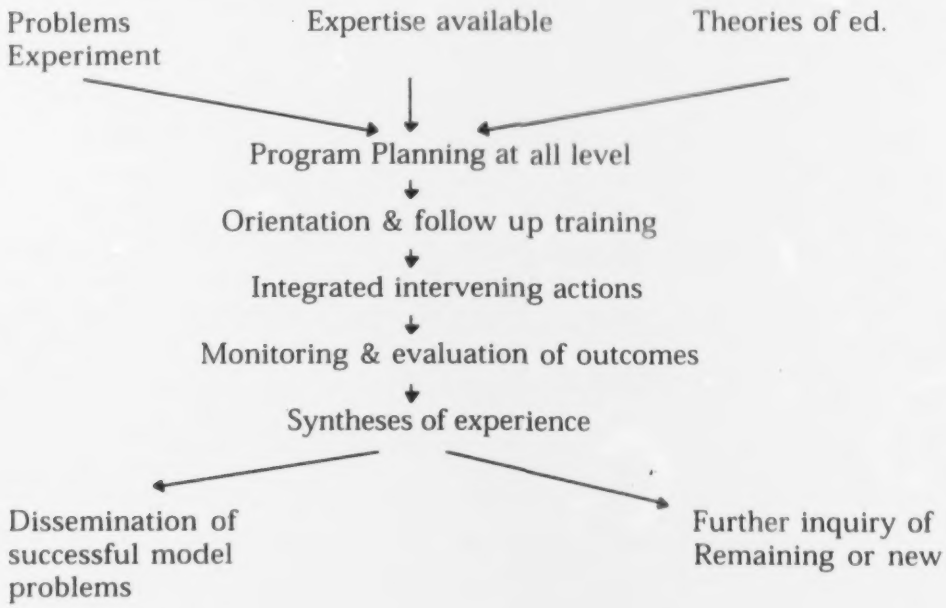
This investigations revealed that in specific terms the following major constraints were responsible for girls' lack of participation in schooling:

1) Under economic pressure, many families were still struggling for the most basic needs of food and clothes and unable o support their children for education;
2) Schools were inadequately funded with a serious lack of basic facilities
3) A high proportion of illiteracy, especially among mothers, effected their expectations for their daughters' education;
4) Some religious rituals e.g., early engagement and marriage, and gender role division;
5) A long distance from households to schools made parents postpone their daughters' attendance to an older age;
6) A rigid formal schooling system failed to cater the remedial needs of out-of-school girls;
7) Poor instruction resulted in girls' experiencing learning difficulties and dropping out;
8) The school curriculum failed to respond to local life and was less attractive for girls; and,
9) There was a shortage of qualified teachers, especially female teachers, with a local ethnic background.

In summary with this contributing forces, the educational programs were less motivating for girls.

2.2 *Intervention*

The problem of girls' education was caused by economic, social, geographical as well as educational constraints and should therefore be tackled with an integrated problem-solving model shown below:



Such a problem-solving model was sustained with the intervening actions as the following:

1. **Decentralized planning**

After the regional planning meeting, a national workshop was held to work out the objectives, action areas and implementation mechanism. Within the APEID project framework and with reference to the particular local conditions, action plans were developed at provincial, county, township and school levels so as to address the specific problems which might vary from place to place. This exercise proved effective to motivate local participants and to ensure the feasibility of the planned actions.

2. **Flexible training**

As an integrated problem-solving approach, the project involved many parties of the community such as teachers, school headmasters, parents and community leaders in charge of education, women, youth and religious

affairs. The short-term orientation workshops, normally three days of duration, were organized form the community leaders. In view of the pressing professional needs of the teachers, a mobile training team was formed with successful teachers, specialists and project leaders. They visited the project schools to observe the local teachers' instruction, to discuss with them on how to improve their performance and finally to conduct a 3-day training course combined with stage demonstrations and tutorial lectures. During April-May 1992, a total number of 2300 teachers were trained by the mobile team. As the field project coordinators, 20 headmasters and program officers were sent to Guizhou and Yunnan provinces on a study tour on school management in difficult contexts. With the sponsorship of UNESCO, four project executives went to Bangladesh on an exposure program on its non-formal primary education project. Besides, review meetings and workshops on special topics were also employed as a training mechanism. With various programs, a competent team was prepared to implement the project.

3. **Community mobilization**

All the project schools carried out various advocacy programs such as parents meetings and school open days. On these occasions, children's performance, exhibitions of handicraft works, classroom observation were organized for parents and community members. Teachers and students also went to the public places and local families to publicize the Compulsory Education Law and the pilot project. In order for all girls to have access to schooling, girls with economic difficulties were provided with reduced or free schooling fees. Many teachers volunteered to help poor girls with their meager salary. With such efforts, the community members were mobilized to send their children to school and in the meantime to assist the schools with money, materials and labor. Consequently, the school conditions were fairly improved.

4. **Preschool intervention**

In view of the fact that most of the parents especially mothers were illiterate and therefore difficult to prepare their children to adapt to school life, the project schools established preschool classes of one year duration. A teachers' instructional guidebook on preschool learning activities was developed. This practice proved effective in bridging over the gap between family and school and reducing the repetition rate.

5. **Local materials**

In response to the specific needs of girls in disadvantaged conditions, a series of local learning materials were prepared to strengthen the relevance of

curriculum with attractive and practical skills. The contents were related to such topics as local environment and resources, poultry and livestock, straw weaving, sewing and embroidery, personal hygiene and so on. Besides, some success stories of women in the local community were compiled to motivate the girls.

6. Non-formal education

In spite of the mobilization efforts of the project, there were around 100 children, mostly girls, who have no access to formal schooling. Such problem was typical in all similar contexts. Non-formal primary education approaches were adopted for the remedial purpose. A group of curriculum specialists were organized to prepare, with the most basic literacy skills, a textbook together with a teachers handbook for the target group. The instruction was engaged with weekly family visits by teachers, peer group learning and individual study. With one year's trial, most of the girls and disadvantaged children involved in the non-formal program learned 1,500 Chinese characters, the four arithmetic operations and some common sense in their daily life. The context are listed in Annex.

7. Fund raising

Financial constraint is always a problem particularly in the economically impoverished areas. The pilot project was fortunate in obtaining the continuous funding of the Japanese Fund-in-Trust through the UNESCO Principal Regional Office for Asia and the Pacific, the financial and administrative support from the Chinese National Commission for UNESCO and the Education Commission of Gansu Province, as well as the government agencies and communities at the grassroots level. As an education project, however, all the schools were encouraged to initiate fund-raising activities, including keeping economic plants, collecting medicinal herbs, weaving, embroidery and so on. Such activities were geared not only to raise additional funds but, more importantly, to enhance the self-supporting ability of girls.

8. Monographic studies

Along with the progress of the project, series studies on special subjects were undertaken. These included topics like literature available on girls' education, obstacles for girls to attend school, non-formal primary education, mobile teacher training, women's education in Asia and the Pacific, preschool education of rural girls, rural schools run by private individuals, oral history on girls education, evaluation of the learning achievement of the project schools. The outcomes resulted from such studies were found both

facilitating for the project and implicative for an in-depth understanding on girls' education.

9. **Extensive collaboration**

In addition to the cooperation within the province, the project benefited a great deal from the sponsorship and support from UNESCO Bangkok, the Chinese National Commission for UNESCO, the Education Commission of Gansu Province and the Women's Federation of Gansu Province. As a counterpart in the joint action research, Gansu maintained effective cooperation with Ningxia, Qinghai and Guizhou provinces particularly in project planning, workshop, and sharing of experience. Moreover, the project profited enormously from the expertise of the scholars of Beijing University, Beijing Normal University, Shanghai Normal University, and the National Institute for Educational Studies. With the extensive and effective collaboration, the pilot projects was able to proceed over the last four years in arduous conditions and finally succeeded with encouraging outcomes.

2.3 *Outcomes*

With the integrated intervening measures over the last four years, positive changes have been made. Owing to the preschool interactions, most of the children have received certain preparation prior to their formal schooling. The enrollment rate and retention rate have been raised by 11% and 3% respectively while the repetition and dropout have been reduced by 8% and 2%, and girls' participation has increased steadily in all the project counties (See Table 8).

Table 8. Participation of Girls in Project Schools, Gansu

County/School Year	91-91	92-92	93-94	94-95
Hezheng	35.10%	41.35%	40.26%	41.21%
Tianzhu	49.46	46.88	50.10	53.53
Tongwei	43.12	43.08	45.42	45.57

Table 9. Changes with Teachers in Project Schools, Gansu (1991-1995)

Year	Total Number	Qualified Teachers %	Female Teachers	%
1992	159	57.78	43	27.00
1993	166	79.44	45	27.10
1994	165	82.07	46	27.88
1995	168	N/A	49	29.17

Up to now, the pilot project schools have become demonstrative in fostering successful universal primary education for girls in disadvantaged areas. The integrated problem-solving approach has now been recommended for dissemination in a larger scale.

III. Implications

International experiences have demonstrated that to achieve the full UPE target requests, persistent national commitment, particularly in socially, geographically and economically disadvantaged contexts, are required. Therefore, unconventional modalities should be included as special aid to the human resource development in these areas. In spite of the rapid UPE expansion, access and achievement have remained the two major challenges for most of the developing nations. As a matter of fact, the diversity between populated urban areas and sparsely populated rural communities has become alarming in many parts of the developing world. In the case of China or even Asia, the most impressive progress seems both encouraging and, at the same, quite likely misleading in the way that we tend to ignore the disturbing number of children who have no access or fail with under-achievement. However, it is our shared belief that the significance of the pilot project lies in that it proves that with well designed and implemented interventions we can overcome disadvantages and finally make a difference.

Specially the implication could be highlighted as follows:

3.1 UNESCO Motivation

To a large extent, willing participation was achieved at the beginning through the prestigious status of UNESCO which in known for its dedication to world peace by fostering international understanding, cooperative-operative and development in the spheres of education, science and culture. In fact the association with UNESCO was cherished as such a privilege for the Chinese practitioners that they tried hard to prove worthy of this voluntary involvement in the grassroots communities and to hear numerous vivid motivation stories. It was true that through these programs those distant ideas like innovation, cooperative-operation, sharing and mutual development came all the way to the hearts of thousands of people in disadvantaged localities. To most of them this was indeed how they came to understand UNESCO.

3.2 Projects Relevance

Both projects were highly relevant to the special needs of the local contexts and supplementary to the current national priorities for UPE development. With this background the innovation initiatives were employed as a constructive means of facilitating the on-going national as well as local educational endeavors.

The project plans were also under constant modification to ensure flexibility and relevance. As a result, it is very likely that in the end the project action plans were different to the initial proposals. The localized project framework itself, however, could well be a positive outcome of the innovation which, in return, would enhance the vitality of the innovation itself.

3.3 Leadership Team

Apart from the continuing support and supervision form ACEID and the Chinese National Commission for UNESCO, a strong and action-committed leadership was predominant. The team was composed of senior administrators, researchers, local government officials and school headmasters.

3.4 Ecological Approach

Another useful implication foe educationists seems to be the presentation of an alternative action model to solve educational

problems which I would refer to as "the ecological approach." In justifying the hypotheses that the participation and achievement of children in primary education are related to environmental factors (e.g., children's preschool preparation, teachers' performance, curriculum relevance, school management, family/community cooperative-operation) and that if a conducive environment were created and maintained to tackle these constraints, it would lead gradually towards the desired improvement. This appears to suggest an alternative integrated approach, rather than a partial solution, particularly in disadvantaged conditions.

3.5 Collaborative Partnership

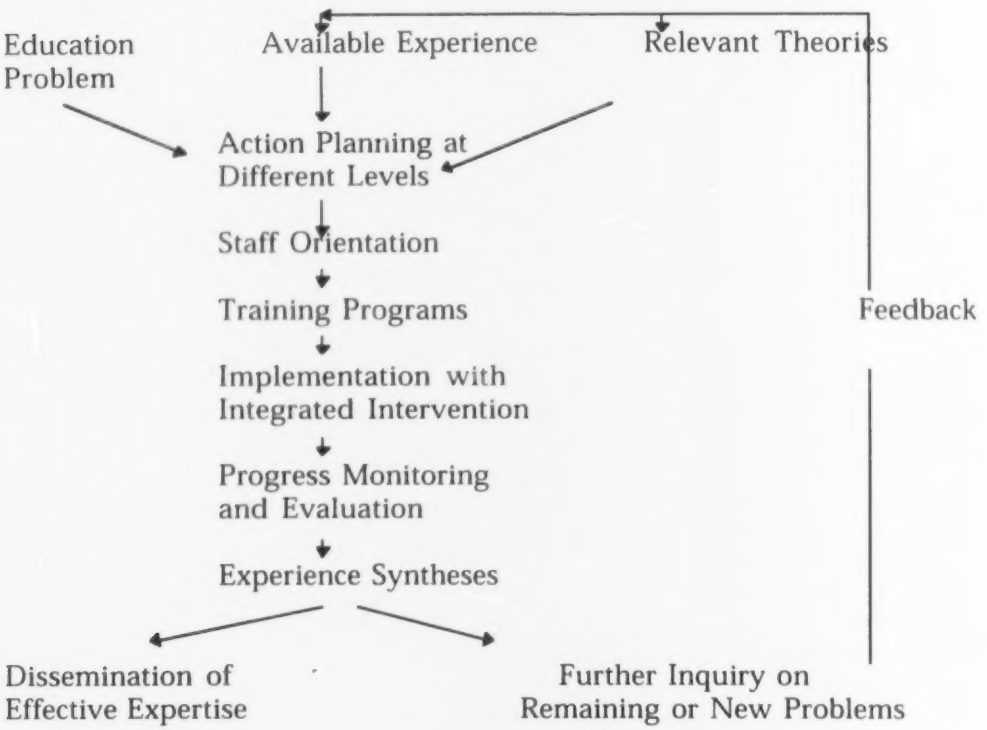
It is a distinctive feature of the project that the effective collaboration between all parties involved has been critical for the successful operation of the planned innovation. However, as we examined the dynamics of the processes in the practice, we found that the innovation process were enacted mainly by three driving forces, namely, system administrators at all levels, research specialists of the pedagogic network, and grassroots practitioners (e.g., headmasters, teachers, students, parents and community members).

The project organization was in fact an interactive partnership between the participants. Generally speaking, a cycle of educational innovation, in a relatively centralized system like China, consist of research employed to identify the problems and then to pose a tentative project framework; introduction of the project with administrative force, extensive involvement at grassroots schools; research again exercised to assess progress; and finally, dissemination or integration through the administrative commitment, grassroots participation and professional support, in which a strong administration is the key to keeping the innovation going.

3.6 Action Research Model

The implementation process followed a problem-solving pattern i.e., to identify the problems, to formulate action plans, with reference to available experience and relevant theories to implement the planed actions, and finally to evaluate the outcomes for dissemination and further inquiry. This seems to suggest a kind of action research model for solving educational problems as illustrated in Figure 1.

Figure 1. Action research model for educational innovation



3.7 Compound Outcomes

It was our perception that the value of significant innovation was not only measured by an improved environment conducive to greater access or achievement of the target groups but also other outcomes. These would further include a redefined project framework, transferable in wider scales, team building for future innovation and, more importantly, in-depth insights to understand and to conduct innovations in a more assured manner. While the upgrade achievement level may well be the immediate outcome, a more accountable mechanism and a more committed, capable team would serve for the problem-solving purposes in a wider range, over a longer period in the years to come.

IV. Problems and Proposals for the Future Actions

4.1 *Problems*

In spite of the remarkable achievement of the pilot project, one problem remained outstanding, that is, the lack of sustainability due to the scarcity of the funding support from the local community. For example, the non-formal primary education was introduced first on voluntary basis whereby local teachers worked additional hours to give tutorial lessons to out-of-school girls while there was no additional allowances to cover their cost.

Personnel stability was other factor. In one county, the local leader was transferred with promotion but the position remained vacant for more than one year and nobody was put to coordinate the program activities. Consequently, the activities in the county was lowered.

Another problem was associated with the project design itself. It was true that the project was successful in raising community's awareness in valuing girls education and in increasing their enrollment. However the link between their access and learning achievement and their aspiration to poverty alleviation ad improvement of quality of life seemed to be less demonstrative.

4.2 *Proposal*

In view of these problems, the following proposals were raised:

First, future program design be more closely oriented toward poverty alleviation such as to integrate functional literacy, enterprise skills' training and follow-up support (e.g., loans or other material assistance), so that the programs may be more visible and therefore more self-justifying.

Second, to introduce education innovations is a costly exercise particularly in disadvantaged areas where the management of the limited resources is always relatively centralized. Therefore, it is proposed that material inputs be mobilized from national government and other development agencies in addition to UNESCO funding.

Currently ad expansion is under preparation aiming to work toward empowerment of disadvantaged girls for self-reliant development. The expansion project in discussion will be implemented between 1996-2000 with participation of more provinces.